SYSTEMS AND METHODS FOR ENHANCED EVALUATION OF PRE-OWNED ELECTRONIC DEVICES AND PROVISION OF PROTECTION PLANS, REPAIR, CERTIFICATIONS, ETC.

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is related to U.S. patent application Ser. No. 15/598,004 filed on May 17, 2017, U.S. patent application Ser. No. 15/153,137 filed on May 12, 2016, Patent Cooperation Treaty (PCT) Application No. PCT/IB2018/055219 filed on Jul. 13, 2018, PCT Application No. PCT/IB2018/055218 filed on Jul. 13, 2018, and PCT Application No. PCT/IB2019/056533 filed on Jul. 31, 2019, each of which is hereby incorporated by reference in its entirety. This application is a continuation-in-part of PCT Application No. PCT/IB2019/056533 filed on Jul. 31, 2019, and also claims the benefit of priority from U.S. Provisional Application No. 62/915,557 filed on Oct. 15, 2019.

FIELD OF THE TECHNOLOGY

[0002] The technology presented herein relates to systems and methods related to the evaluation of pre-owned electronic devices. In some examples, the technology is related to remote collection of small electronic devices in exchange for value. In some examples, the technology is related to remote identification, verification and/or evaluation for providing various services other than, or in addition to, remote collection.

BACKGROUND

[0003] Small electronic devices such as smartphones, tablet computers, smart watches, etc. are now in widespread use. These small consumer electronic devices may be collectively referred to herein as "pre-owned electronic devices", "pre-owned devices" or "PODs". With increased use among all segments of the populations, numerous services and other applications are frequently released by various entities to be performed or used on such devices. Also, the hardware and/or software of these devices are frequently upgraded in the form of new devices being released by manufacturers.

[0004] U.S. patent application Ser. No. 15/598,004 filed on May 17, 2017, U.S. patent application Ser. No. 15/153,137 filed on May 12, 2016, PCT Application No. PCT/IB2018/055218, and Jul. 13, 2018, and PCT Application No. PCT/IB2018/055219, and Jul. 13, 2018 the entire contents of which are hereby incorporated by reference in their entireties, filed by the Applicant, described improved systems and techniques for distributed collection centers, such as collection kiosks (herein sometimes also referred to as "booths") that are configured to accept a client's smartphone (or other consumer electronic device) and to then provide the client with an amount of money corresponding to an estimated value. Such systems and techniques enable many people who find themselves in situations where, after having bought a new smartphone or some other consumer electronic device to replace an older device, would like to conveniently and safely dispose of the old device. In many instances, such persons may desire to trade the old device in return for some monetary or other gain.

[0005] However, either in association of such trading of an older device for value or separately, certain other services associated with a small electronic device are required by owners of small consumer electronic devices. Embodiments described in this application provide for remote distributed evaluation devices/collection kiosks and techniques for efficiently providing services associated with small consumer electronic devices.

SUMMARY

[0006] Apparatuses, methods and storage mediums associated with evaluating previously-owned electronic devices are described. An example apparatus includes an evaluation area configured to temporarily include within it a previously owned electronic device, and one or more cameras arranged to capture images of the previously owned electronic device within the evaluation area. The example apparatus also includes a processor configured to evaluate the previously-owned electronic device using at least the one or more cameras, and, based on the evaluation, provide at least one of a repair quote, a protection plan quote, a protection plan claim, a certification, or a promise to purchase for the previously-owned electronic device.

[0007] An example embodiment provides a system for evaluating previously-owned electronic devices, comprising a control system comprising at least one server, and a plurality of evaluation devices communicatively connected over a network to the control system. At least one evaluation device of the plurality of evaluation devices comprises an evaluation area, and a first previously-owned electronic device arranged with one of its cameras configured to capture images of the evaluation area.

[0008] An example embodiment provides an apparatus comprising an evaluation area, and a first previously-owned electronic device arranged with one of its cameras configured to capture images of a second previously-owned electronic device within the evaluation area.

[0009] An example embodiment provides a kiosk for evaluating previously-owned electronic devices, comprising one or more cameras configured to capture images of a previously-owned electronic device including one or more microdefects and/or micro-differences where the one or more microdefects and/or micro-differences are invisible to the naked eye, and a processor. The processor may be configured to control the one or more cameras to capture the images, detect the one or more microdefects and/or micro-differences in the captured images, and use the detected one or more microdefects and/or micro-differences to distinguishingly identify the previously-owned electronic device.

[0010] An example embodiment provides a kiosk for evaluating previously-owned electronic devices, comprising an evaluation area configured to temporarily include within it a previously owned electronic device, one or more cameras arranged to capture images of the previously owned electronic device within the evaluation area, and a processor. The processor may be configured to select a context from a plurality of preconfigured contexts in accordance with a user-selected service, configure a set of rules based on the selected context, and control at least the one or more cameras in accordance with the configured set of rules to determine an evaluation of the previously owned electronic device.

[0011] An example embodiment provides an apparatus for evaluating previously-owned electronic devices, comprising